

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all previous claims in the application:

1 1. (Currently amended) A computer system communicatively coupled to a
2 network, comprising:
3 a programmable non-volatile memory;
4 at least one microprocessor operatively coupled to execute at least one instruction
5 from the programmable non-volatile memory in response to a boot request, the
6 microprocessor configured to controllably write to the programmable non-volatile
7 memory; and
8 at least one fixed storage device operatively coupled to the at least one
9 microprocessor, the fixed storage device containing a boot image that is configured with
10 appropriate instruction code suited to transition the at least one microprocessor to an
11 operational mode, wherein the at least one fixed storage device receives and stores a boot
12 memory comprising:
13 a system loader;
14 a configuration file; and
15 ~~executable files~~ a firmware patch configured to write a firmware upgrade
16 to the programmable non-volatile memory, the firmware patch comprising:
17 an install application;
18 a firmware revision containing at least one instruction different
19 from firmware within the programmable non-volatile memory; and
20 a flash application having a bootable kernel, firmware update
21 logic, and a non-volatile memory interface, wherein the system
22 loader instructs the microprocessor to write the firmware revision
23 to the programmable non-volatile memory.

1 2. (Canceled)

1 3. (Canceled)

1 4. (Previously presented) The computer system of claim 1, wherein the at
2 least one fixed storage device receives and stores new firmware.

1 5. (Previously presented) The computer system of claim 1, wherein the at
2 least one fixed storage device receives and stores an application.

1 6. (Currently amended) The computer system of claim 5 1, wherein the
2 ~~application comprises a bootable kernel~~ comprises a system loader interface and reboot
3 logic.

1 7. (Previously presented) The computer system of claim 6, wherein the
2 bootable kernel comprises an operating system.

1 8. (Previously presented) The computer system of claim 6, wherein the
2 bootable kernel comprises file management system.

1 9. (Currently amended) A computer network, comprising:
2 a plurality of computer systems communicatively coupled to a network
3 infrastructure, each of the plurality of computer systems configured with a non-volatile
4 memory containing a common firmware version designated for replacement and a fixed
5 storage device containing a boot image having appropriate instruction code suited to
6 transition the respective computer system to an operational mode;
7 a user input device communicatively coupled to at least one computer system
8 communicatively coupled to the network infrastructure, the at least one computer system
9 configured with write access permission for the respective fixed storage device
10 associated with each of the plurality of computer systems, wherein an input from the user
11 input device initiates a transfer of a patch memory map and a firmware upgrade patch to
12 the plurality of computer systems, the firmware upgrade patch comprising a bootable
13 kernel different from an operating system operable on the respective computer system.

1 10. (Previously presented) The network of claim 9, wherein the firmware
2 upgrade patch and the patch memory include instruction code necessary to support
3 replacement of the common firmware version by each of the respective plurality of
4 computer systems.

1 11. (Canceled)

1 12. (Previously presented) The network of claim 9, wherein the firmware
2 upgrade patch comprises an application that contains an operating system.

1 13. (Previously presented) The network of claim 9, wherein the firmware
2 upgrade patch comprises an application that contains a file management system.

1 14. (Currently amended) A computer system communicatively coupled to a
2 network, comprising:
3 means for accessing data stored on a memory device that retains data when power
4 is removed from the memory device, the accessing means responsive to power being
5 applied to the computer system; and
6 means for ~~selectively~~ writing to the memory device in response to a remote input
7 designated to initiate the replacement of the data stored on the memory device, wherein
8 the new data to be stored and a bootable kernel are stored on a fixed storage device
9 within the computer system in response to the remote input, the bootable kernel
10 comprising a system loader interface and reboot logic.

1 15. (Original) The computer system of claim 14, wherein the accessing means
2 comprises a programmable non-volatile memory.

1 16. (Previously presented) The computer system of claim 14, wherein the
2 writing means further comprises:
3 means for storing an operating system and a file management system on the fixed
4 storage device; and
5 means for modifying an initial system loader address in response to the remote
6 input.

1 17. (Original) The computer system of claim 15, wherein the programmable
2 non-volatile memory comprises an electrically erasable programmable read only
3 memory.

1 18. (Currently amended) A method for performing a firmware upgrade,
2 comprising:

3 delivering a firmware install patch containing firmware, an install application,
4 and a boot image flash application to a boot disk within a plurality of networked
5 computer systems each of said computer systems having a firmware version designated
6 for the firmware upgrade, wherein the flash application comprises a bootable kernel,
7 firmware update logic, and a non-volatile memory interface;

8 initiating an install application contained within the firmware install patch, said
9 install application containing instructions suited to perform the firmware upgrade;

10 modifying an initial system loader in response to the install application to direct a
11 microprocessor to execute instructions from the boot image upon a subsequent
12 microprocessor reset input;

13 initiating a microprocessor reset input in response to the install application that
14 loads a plurality of instructions in accordance with the boot image;

15 erasing the firmware within each of the plurality of networked computer systems
16 in response to the install application; and

17 writing the new firmware to each of the plurality of networked computer systems
18 in response to the install application.

1 19. (Original) The method of claim 18, wherein delivering a firmware install
2 patch comprises a network data transfer.

1 20. (Previously presented) The method of claim 18, wherein the delivered
2 firmware install patch comprises a boot image that contains an operating system, a file
3 manager, and at least one executable configured to verify the version of the firmware
4 stored in the computer system prior to writing the new firmware.

1 21. (Previously presented) The method of claim 18, further comprising:
2 installing an operating system that requires the new firmware;
3 installing a software patch that requires the new firmware;
4 redirecting the initial system loader to select the appropriate memory address
5 upon subsequent microprocessor reset inputs to apply the upgraded firmware, operating
6 system, and software patch; and
7 removing the firmware install patch from the computer system.

1 22. - 26. (Canceled)

1 27. (Currently amended) A computer system communicatively coupled to a
2 network, comprising:
3 a programmable non-volatile memory having a first firmware;
4 at least one microprocessor operatively coupled to controllably write to the
5 programmable non-volatile memory and execute at least one instruction from the
6 programmable non-volatile memory in response to a boot request; and
7 at least one fixed storage device operatively coupled to the at least one
8 microprocessor, the storage device containing a firmware patch comprising:
9 a patch memory map comprising an index that identifies the location of:
10 an install application;
11 a second firmware different from the first firmware; and
12 a flash application comprising:
13 a bootable kernel including a system loader interface and
14 reboot logic;
15 a firmware update logic; and
16 a non-volatile memory interface, wherein the flash
17 application instructs a system loader via the system loader interface to select the bootable
18 kernel upon receipt of a boot request.

1 28. (Previously presented) The computer system of claim 27, wherein a
2 system loader executes the flash application.

1 29. (Previously presented) The computer system of claim 27, wherein the
2 firmware update logic and the non-volatile memory interface store the second firmware
3 on the non-volatile memory.

1 30. (Canceled)

1 31. (Previously presented) The computer system of claim 30, wherein upon
2 the occurrence of the boot request, the new firmware and system loader transfer an
3 operating system to a random access memory communicatively coupled to the at least
4 one microprocessor.

1 32. (Previously presented) The computer system of claim 30, wherein the
2 install application executes a file system operation.

1 33. (Previously presented) The computer system of claim 32, wherein the file
2 system operation results in the removal of the firmware patch from the at least one fixed
3 storage device.